

Remarks/Arguments

Applicants reply to the nonfinal Office Action dated May 29, 2009, within the three month shortened statutory period for reply. The Examiner rejects all pending claims. Applicants cancel claims 8, 9, 11, 63, 64, and 65 without prejudice or disclaimer to filing one or more claims directed to similar subject matter. Accordingly, claims 1, 3-4, 10-25, 57, 59-62 and 66 remain pending.¹ Support for the amendments may be found in the originally-filed specification, claims, and figures. Reconsideration of this application is respectfully requested.

Preliminarily, Applicants thank the Examiner for the Examiner interview held on July 9, 2009, between Applicants' patent counsel and the Examiner. As discussed in the Interview, Applicants respectfully submit that the presently claimed invention differs from the references of record, at least in part because the presently claimed invention provides suitable hydrolytic stability in addition to a level of oxidative protection. As noted in the Examiner Interview, the present specification contains extensive data regarding the achieved hydrolytic stability. During the Interview, the Examiner agreed that, with an appropriate clarifying amendment, the data very likely supports a withdrawal of the present 35 U.S.C. § 103(a) rejection. As agreed to in the Examiner Interview, Applicants now include clarifying claim amendments so that the claim scope is commensurate with the disclosed data.

Rejection under 35 U.S.C. § 103(a)

Claims 1-4, 8-23, 25, 26, 27, 57, 59-61, 63-64

The Examiner rejects claims 1-4, 8-23, 25, 26, 27, 57, 59-61, 63-64 under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,759,622 to Stover ("Stover") in view of United States Patent 4,454,193 to Block ("Block"). Applicants respectfully disagree with these rejections, but Applicants amend the claims in order to clarify the patentable aspects of the claims and to expedite prosecution.

Applicants note that Stover and Block were discussed in the April 17, 2009 Reply and again in the July 9, 2009 Examiner Interview. Block discloses that for the purposes of oxidation protection, "[t]he trivalent metal cations therefore require 3 equivalents of phosphorus and the

¹ On page 2 of the outstanding Office Action, the Examiner, "notes amendment to claims 1, the cancellation of claims 2 and 26-56, and the addition of new claims 62-66. Claims 1, 3-4, 8-26, 57, 59-66 are pending in the instant application, with claims 28-56 withdrawn due to a restriction requirement." Applicants respectfully submit that claims 28-56 were canceled without prejudice or disclaimer in the April 17, 2009 Reply to Office Action.

divalent metal cations **require 2 equivalents of phosphorus.** [emphasis added]. (See col. 6, lines 12-14). Further, Block discloses in Table 1 that, when using magnesium nitrate, a metal to phosphate atomic ratio of at least 1:2 (i.e., **0.5**) **must** be used. (See Table 1, col. 6, line 60). [emphasis added]. Accordingly, Applicant submits that Block teaches away from the presently claimed metal to phosphate atomic ratio.

As also discussed in the July 9, 2009 Examiner Interview, Applicants respectfully submit that using lower metal to phosphate ratios than taught in the cited references leads to improved hydrolytic stability. Like oxidation protection, hydrolytic stability is a commercially significant property. However, hydrolytic stability tends to decrease as percent weight gain due to water absorption increases. Accordingly, one method of measuring hydrolytic stability is the determination of percent weight gain due to water absorption after controlled exposure to humidity. In this regard, FIG. 1 illustrates a metal to phosphate ratio in relation to percent weight gain due to water absorption. As shown by the data, metal to phosphate ratios in the range presently claimed lead to unexpectedly enhanced hydrolytic stability.

Further, the various Examples set forth in the present application support the present claims. In this regard, Tables 1, 2, and 3 disclose various formulations and measured properties, including percent weight gain after humidity exposure and Table 4 shows the percentage of moisture absorbed for Examples 1(b), 2(b), and 3(b). As proposed in the July 9, 2009 Examiner Interview, Applicants amend claim 1 so that it is commensurate in scope with the data contained in the present specification. For example, claim 1 now includes, at least, wherein "the additional metal salt comprises at least one of a magnesium salt, zinc chloride, iron nitrate, and tin chloride." Many magnesium salts are disclosed in the present specification, such as magnesium phosphate, magnesium chloride, magnesium nitrate, and magnesium sulfate. In particular, Table 1 sets forth examples having magnesium phosphate and Table 2 sets forth examples having magnesium chloride and magnesium nitrate. An example having zinc chloride is illustrated in Table 3. An example having iron nitrate is illustrated in Table 1. An example having tin chloride is illustrated in Table 1. Each of the Tables illustrate percent weight gain after humidity exposure, so the data provided in the present specification supports the claimed species.

Claim 1 includes a metal to phosphate range lower than that taught by the cited references, and, indeed, claim 1 contains a metal to phosphate range from which the cited references teach away. Further, claim 1 is commensurate in scope with the data provided in the

specification, as the present specification contains data related to each of the claimed species. Accordingly, Applicants respectfully submit that claim 1 is now allowable.

Additionally, dependent claims 3-4, 10, 12-23, 25, 26, 27, 57, and 59-61 variously depend from independent claim 1 and Applicants thus assert that dependent claims 3-4, 10, 12-23, 25, 26, 27, 57, and 59-61 are patentable for at least the same reasons for differentiating independent claim 1, as well as in view of their own respective features. Accordingly, Applicants respectfully request that this rejection be withdrawn.

Claims 2, 8, 9, 11, 63 and 64 are now canceled, so Applicants submit that this rejection is moot and respectfully request any rejections of these claims be withdrawn.

Claims 1-4, 8-10, 14-23, 25, 26, 27, 57, 59-61, and 65

The Examiner rejects claims 1-4, 8-10, 14-23, 25, 26, 27, 57, 59-61 and 65 under 35 U.S.C. 103(a) as being unpatentable over Stover in view of U.S. Patent No. 3,342,627 to Paxton ("Paxton"). Applicants respectfully disagree with these rejections, but Applicants amend the claims in order to clarify the patentable aspects of the claims and to expedite prosecution.

As stated above, Stover and Block are discussed above and in the April 17, 2009 Reply. Applicants further note that Paxton discloses the use of magnesium phosphate and zinc phosphate for oxidation protection. (See col. 2, lines 53-66).

However, neither Stover, Paxton, nor any combination thereof, disclose or contemplate at least, "wherein the oxidation inhibiting composition has a metal to phosphate atomic ratio of 0.26 to 0.4." Specifically, neither Paxton nor Stover, alone or in combination, disclose or contemplate such a range. Accordingly, Applicants submit that claim 1 is allowable over the cited references.

Additionally, dependent claims 3-4, 10, 14-23, 25, 26, 27, 57, 59-61 and 65 variously depend from independent claim 1 and Applicants thus assert that dependent claims 3-4, 10, 14-23, 25, 26, 27, 57, 59-61 and 65 are patentable for at least the same reasons for differentiating independent claim 1, as well as in view of their own respective features. As such, Applicants respectfully request that this rejection be withdrawn.

Claims 3, 8, 9 and 11 are now canceled, so Applicants submit that this rejection is moot and respectfully request any rejections of these claims be withdrawn.

Claims 1-4, 8, 11-23, 25, 26, 27, 57, 59-61, and 66

The Examiner rejects claims 1-4, 8, 11-23, 25, 26, 27, 57, 59-61, and 66 under 35 U.S.C. 103(a) as being unpatentable over Stover in view of U.S. Patent No. 4,726,995 to Chiu (“Chiu”). Applicants respectfully disagree with these rejections but Applicants amend the claims in order to clarify the patentable aspects of the claims and to expedite prosecution.

Stover is discussed above. Applicants further note that Chiu discloses “oxidation retarded graphite.” (See Title). More specifically, Chiu discloses that a halide ion disposed on the surface of a phosphate-treated electrode may achieve oxidation protection. (See col. 2, lines 60-62).

However, neither Stover, Chiu, nor any combination thereof, disclose or contemplate, at least, “wherein the oxidation inhibiting composition has a metal to phosphate atomic ratio of 0.26 to 0.4.” Neither Chiu nor Stover, alone or in combination, disclose or contemplate such a range. Accordingly, Applicants submit that claim 1 is allowable over the cited references.

Additionally, dependent claims 3-4, 12-23, 25, 26, 27, 57, 59-61, and 66 variously depend from independent claim 1, and Applicants thus assert that dependent claims 3-4, 12-23, 25, 26, 27, 57, 59-61, and 66 are patentable for at least the same reasons for differentiating independent claim 1, as well as in view of their own respective features. As such, Applicants respectfully request that this rejection be withdrawn.

Claims 2 and 8 are now canceled, so Applicants submit that this rejection for claims 2 and 8 is moot and respectfully request any rejections of these claims be withdrawn.

Claim 24

The Examiner rejects claim 24 under 35 U.S.C. 103(a) as being unpatentable over Stover in view of Block and further in view of United States Patent 4,425,407 to Galasso, et al. (“Galasso”). The Examiner further rejects the claim over Stover in view of Paxton and Galasso. Applicants respectfully disagree with this rejection, but Applicants amend claim 1, from which claim 24 depends, in order to clarify the patentable aspects of the claims and to expedite prosecution.

Again, Stover and Block are discussed above. Applicants further note that Galasso discloses a silicon carbide deposition on a carbon-carbon composite material.

However, neither Stover, Galasso, Block, nor any combination thereof, disclose or contemplate, at least, "wherein the oxidation inhibiting composition has a metal to phosphate atomic ratio of 0.26 to 0.4." as recited in the present claim 1.

Moreover, dependent claim 24 variously depend from independent claim 1, so Applicants assert that dependent claim 24 is patentable for at least the same reasons for differentiating independent claim 1, as well as in view of its own respective features. Applicants respectfully request that this rejection be withdrawn.

Conclusion

Applicants submit that all pending claims are in condition for allowance. Should the Examiner have questions, Applicants request that the Examiner contact the undersigned representative at the telephone number listed below. The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account No. 19-2814. **This statement does NOT authorize charge of the issue fee.**

Respectfully submitted,

Snell & Wilmer L.L.P.

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By: 

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